

AMENDMENT UNDER 37 C.F.R. § 1.111, RESPONSE TO NOTICE
U.S. Appln. No. 10/603,937

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. - 10. (canceled).

11. (previously presented): An exposure apparatus for forming an image on a recording medium by scanning exposure, the apparatus comprising:

a light source for ejecting a light beam emitted in a broad area for at least a main-scanning direction;

a condensing optical system for condensing the light beam emitted from the light source on the recording medium; and

an array refracting element which is disposed between the light source and the recording medium so that a direction, which two refracting members are arranged in at least two pair units in an array shape, is substantially parallel to the broad area direction of the light beam emitted from the light source, wherein the array refracting element includes a refracting member having a unit surface shape dividing one light beam into two light beams by ejecting the one incident light beam toward different positions,

wherein the array refracting element is configured to arrange the two refracting members in at least two pair units in an array shape in a direction orthogonal to a light beam dividing direction.

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12. (original): The exposure apparatus of claim 11, wherein the array refracting element is disposed at a position at which a far field pattern of the light beam emitted from the light source is formed.

13. (original): The exposure apparatus of claim 11 further comprising:
an inputting component for inputting resolution information showing resolution of an image formed on the recording medium by the scanning exposure; and
a moving component in which the array refracting element is removed from the optical axis of the light beam emitted from the light source when the resolution shown by the resolution information is a predetermined first resolution, and the array refracting element is moved so as to be placed on the optical axis when the resolution shown by the resolution information is a second resolution which is lower than the first resolution.

14. (previously presented): An exposure apparatus for forming an image on a recording medium by scanning exposure, the apparatus comprising:

a light source for ejecting a light beam emitted in a broad area for at least a main-scanning direction;
a condensing optical system for condensing the light beam emitted from the light source on the recording medium; and
an array diffracting element which is disposed between the light source and the recording medium so that a direction, in which two refracting members are arranged in at least two pair

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units in an array shape, is substantially parallel to the broad area direction of the light beam emitted from the light source, wherein the array diffracting element includes two refracting members, at least one of which is formed as a diffracting member, having a unit surface shape for dividing the light beam into two light beams,

wherein the two refracting members are arranged in at least two pair units in an array shape in a direction orthogonal to a light beam dividing direction.

15. (original): The exposure apparatus of claim 14, wherein the array diffracting element is disposed at a position at which a far field pattern of the light beam emitted from the light source is formed.

16. (original): The exposure apparatus of claim 14 further comprising:
an inputting component for inputting resolution information showing resolution of an image formed on the recording medium by the scanning exposure; and
a moving component in which the array diffracting element is removed from the optical axis of the light beam emitted from the light source when the resolution shown by the resolution information is a predetermined first resolution, and the array diffracting element is moved so as to be placed on the optical axis when the resolution shown by the resolution information is a second resolution which is lower than the first resolution.

17. (canceled).

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18. (previously presented): The exposure apparatus of claim 11, wherein the array refracting element comprises:

two refracting members in pair units that divide the same incident light beam being split in two directions.

19. (cancelled).

20. (currently amended): The exposure apparatus of claim 11, wherein when a resolution is $2 \cdot K_0$ (dpi),

$$W = \frac{(N - 1) \times 2 \cdot \varepsilon}{2} + \varepsilon = N \cdot \varepsilon$$

and wherein when the resolution is K_0 (dpi),

$$W' \equiv N \times 2 \cdot \varepsilon;$$

where: ε is a scanning line pitch of each light beam in a sub-scanning direction;

N is the number of light sources;

W is a feed pitch in the sub-scanning direction for $2 \cdot K_0$; and

W' is the feed pitch in the sub-scanning direction for K_0 .

21. (cancelled).

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22. (previously presented): The exposure apparatus of claim 18, wherein the array refracting element comprises:

two refracting members in pair units that form adjacent members, said adjacent members are placed side by side in the direction orthogonal to the light beam dividing direction.